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Environmental Restoration Project
Desk Instruction

for:

Generating Standard ER Project Data Table Formats Using MS Excel Tools

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Generating Standard ER Project Report Formats Using MS Excel Tools

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- Note:** ER Project personnel may produce paper copies of this procedure printed from the controlled-document electronic file located at http://erinternal.lanl.gov/home_links/Library_proc.htm. However, it is their responsibility to ensure that they are trained to and utilizing the current version of this procedure. The author may be contacted if text is unclear.
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PURPOSE

This DI states the responsibilities and describes the process for producing standardized data table formats generated from the ER Project technical database using customized Microsoft Excel tools. This DI is intended for use by ER Project Data Stewards under the Analysis and Assessment (A3) Focus Area.

The Microsoft Excel tools described in this DI have been developed to format the Excel output files from the customized Microsoft Access tools described in DI-4.10, "Preparing Electronic Datasets from the ER Technical Database."

This DI requires account privileges to the AAA folder residing on the ER6 server and at least an intermediate working knowledge of MS Excel. An intermediate knowledge of Visual Basic is desirable for developing and maintaining macros.

1.0 DEFINITIONS

- 1.1 A3—Acronym for Analysis and Assessment, the ER Project Focus Area responsible for the activities in this Desk Instruction.
- 1.2 Authorizing individual—An appropriate ER Project Management Team (PMT) member, Project Team Leader, Task Leader, or other authorized individual who has the authority to delegate the generation of electronic data tables.
- 1.3 Data Steward—A member of the Data Analysis and Assessments Team under the Analysis and Assessments Focus Area who is trained to this DI and is responsible for performing the tasks described in this DI.

- 1.4 *FD Table* — The Frequency of Detect (FD) table summarizes the results of comparing a given dataset with LANL-specific background values (see Table 1). The required format is provided in the ER Project RFI Report Annotated Outline, accessible from the ER internal web site at:
http://erinternal.lanl.gov/home_links/Library_doctemp.htm
- 1.5 *LOCATION_ID* — The unique identifier corresponding to a particular sample location.
- 1.6 *Requesting individual* — An individual granted authority by an authorizing individual to request electronic data sets.
- 1.7 *RFI* — RCRA Facility Investigation
- 1.8 *RFI Class* — The class of chemical constituent, classes being either organic, inorganic, or radionuclide.
- 1.9 *RFI Report* — RCRA Facility Investigation report; a standard ER Project deliverable to the New Mexico Environment Department that is prepared according to the RFI Report Annotated Outline.
- 1.10 *SAL* — Screening Action Level.
- 1.11 *Sample ID* — The unique identifier corresponding to a particular sample.
- 1.12 *SID Table* — The Sample ID-specific (SID) table is a background comparison table that summarizes the results of comparing a given dataset with LANL-specific background values for each individual Sample_ID/Location_ID in the dataset (see Table 1).
- 1.13 *ST Table* — The Samples Taken (ST) Table is a listing of Sample_ID/Location_IDs showing the depths at which the sample was taken and the analytical suites represented (see Table 1).

2.0 RESPONSIBLE PERSONNEL

The following personnel are responsible for activities identified in Section 4.0 of this DI:

- 2.1 *A3 Team Leader* — The Data Analysis and Assessment Team Leader, who ensures that the Data Stewards are appropriately trained.
- 2.2 *Data Steward* — Executes the tasks described in this DI.
- 2.3 *Requesting individual* — Provides technical specifications for the required data table format; identifies the fields and information to be provided in the tables.

3.0 PROCEDURE

This DI is to be used in conjunction with DI-4.10, “Preparing Electronic Data Sets from the ER Project Technical Database.” This procedure describes the process by which data stewards may develop or use existing Excel macros to generate the final formatted output for data that is to be used either for ER Project internal use, or formally included in an ER Project deliverable.

- Note:** The person(s) responsible for generating the data sets in acceptable report formats are the Data Stewards, also herein called the users. This DI describes the most current and commonly used data table formats. Some decisions regarding data use for a particular purpose rest with the requesting individual or the Data Analysis and Assessment Team Leader.
- Note:** It is required that any data table generated using this DI be internally reviewed by a qualified data steward in the A3 Focus Area as directed in DI-4.26, “Use of the Data Analysis and Assessment Dataset Tracking Database.”

3.1 Use of Existing Excel Macros to Generate Data Summary Tables

- 4.1.1 The user opens the AAA subdirectory on the ER6 server.
- 4.1.2 The user opens the folder called AAA_DATASETS.
- 4.1.3 The user opens the folder called DIs. The user opens the folder called DS_Macros.
- 4.1.4 The user opens the file called DSMacros.xls. Excel opens, and a blank worksheet appears. Minimize the window, but keep the file open because it contains the macros the user calls to generate the output format.
- 4.1.5 The user opens the input file generated from the source MS Access database that is exported to Excel using the “Exports R Us” add-in. (See DI-4.10 for further instructions in preparing the input file.)
- 4.1.6 The user selects “Tools,” “Macro,” “Macros.” The Macro screen appears, and the user views a list of macro titles. Table 1 lists the available macro titles and the input and output tables associated with each macro. The titles of the main macros are preceded with “MASTER.”

Note: The MASTER macros will stand out because they are written in upper case. The other macros in lower case are subroutines linked together by the MASTER macros.

- 4.1.7 The user selects the desired MASTER macro and clicks “Run.”

4.1.8 The user views the input file transform into a readable and presentable standardized output format for the data summary table. The MASTER macro stops with the output file in print preview mode.

4.1.9 The user performs a visual check to see that all columns are represented.

4.1.10 The user must manually add an appropriate title to the file. From the toolbar the user selects “Setup;” the Page Setup screen appears. The user selects “Header/Footer,” then “Custom Header.” The Header screen appears.

4.1.11 The user highlights the center section that says “Your Title Goes Here in Bold Arial 12-pt. Font,” and replaces it with an appropriate title.

Note: If the user is unsure of the title, ask the requesting individual or the A3 Team Leader.

4.1.12 The user clicks “OK” on the Header screen, then again on the Page Setup screen, then closes out of print preview mode.

Note: The MASTER macro performs dozens of interim steps before stopping in print preview mode. The macro selects and centers the fonts, selects and eliminates certain columns, formats the column widths, configures the page setup, and other operations that are ordinarily very time-consuming to perform manually. The MASTER calls shorter, individual subroutines so that minor modifications to the MASTER macro can be made with ease and flexibility. For example, sometimes the requesting individual wants the data screened to Residential SALs, sometimes to Industrial SALs. To make the change in the MASTER macro, the user needs to go into edit mode, and replace a single line of code; i.e., call a different subroutine, rather than rewriting the MASTER.

4.1.13 The final step in preparing the output file must be performed manually. The values that appear in the calculated fields such as the mean of detects are not in a consistent format. The preferred output for the data summary table is decimal. In Excel only the number of decimal places can be specified globally. But for each record within a given data table the values can vary by orders of magnitude depending on the chemical constituent, concentration, and/or SAL. So the user needs to manually go through each record and select a reasonable number of significant digits to be consistent *within that particular record*. Once the above step is performed, the file is ready for internal review.

Table 1. Types of formatted data tables and the macros used to generate them.

OUTPUT TABLE	INPUT TABLE	MACRO TITLE
Frequency of Detect (FD) table for public or web-based release (soils and sediments) (Attachment A)	[filename]_FD.xls exported from MS Access source database (sediment tables) (Attachment B)	MASTER_WEB_FD_[INORGANIC/ORGANIC/RAD]
Frequency of Detect (FD) table for public release (alluvial groundwater [AGW] or surface water [SW]) (Attachment C)	[filename]_FD.xls exported from MS Access source database (water tables) (Attachment D)	MASTER_AGW_FD_[INORGANIC/ORGANIC/RAD] MASTER_SW_FD_[INORGANIC/ORGANIC/RAD]
Frequency of Detect table for RFI Report (Attachment E)	[filename]_FD.xls exported from MS Access source database (Attachment B)	MASTER_RFI_[INORGANIC/ORGANIC/RAD]
Sample ID-specific (SID) table for RFI Report (Attachment F)	[filename]_SID.xls exported from MS Access source database (Attachment G)	MASTER_RFI_SID_[INORGANIC/ORGANIC/RAD]
Samples Taken Table for internal review (Attachment H)	The finished output for the Samples Taken Table is automatically generated from the MS Access source database	MASTER_SAMPLES_TAKEN_TABLE

4.1.14 The users of this DI need to track their work because it is part of the overall effort in preparing the dataset and managing A3 resources. Please refer to DI-4.26, “Use of the Data Analysis and Assessment Dataset Tracking Database,” for instructions on tracking and archiving datasets.

4.0 TRAINING

All users of this DI are trained by self-study and through informal training by qualified Data Stewards.

5.0 ATTACHMENTS

The user of this DI may employ table formats different from those attached in the following section—as long as the substituted formats provide, as a minimum, the information required by the requesting individual or by the ER Project deliverable.

Attachment A: Example Excel Output File in Frequency of Detect Format for Public or Web-Based Release (sediments)

Attachment B: Example Excel Input File from MS Access Source Database in Frequency of Detect Format (sediments)

Attachment C: Example Excel Output File in Frequency of Detect Format for Public or Web-Based Release (alluvial groundwater)

Attachment D: Example Excel Input File from MS Access Source Database in Frequency of Detect Format (alluvial groundwater)

Attachment E: Example Excel Output File in Frequency of Detect Format for RFI Report

Attachment F: Example Excel Output File in Sample ID-specific (SID) Format for RFI Report

Attachment G: Example Excel Input File from MS Access Source Database in Sample ID Format

Attachment H: Example Excel Output File in Samples Taken Table Format

Attachment A
Example Excel Output File in Frequency of Detect Format
for Public or Web-Based Release (Sediments)

Example Excel Output File in FD Format for Web-Based Release (Soils and Sediments)

Analyte	Media Code	Number of Analyses	Number of Detects	Minimum of Detects mg/kg)	Mean of Detects (mg/kg)	Maximum of Detects (mg/kg)	Soil Background Value (mg/kg)	Frequency of Detects >Background Value	Industrial Screening Level (mg/kg)	Frequency of Detects >Industrial Screening Level
Aluminum	ALLH	46	46	1800	6300	97000	29200	1/46	100000	0/46
Antimony	ALLH	46	2	13.6	14.7	15.8	0.83	2/46	820	0/46
Arsenic	ALLH	46	14	0.75	40	520	8.17	1/46	2.3	12/46
Barium	ALLH	46	41	40	90	200	295	0/46	100000	0/46
Beryllium	ALLH	46	39	1.2	8.9	101	1.83	32/46	2200	0/46
Cadmium	ALLH	46	2	1.1	1.15	1.2	0.4	2/46	1000	0/46
Calcium	ALLH	46	46	530	2500	14000	6120	1/46	—	—
Chromium, total	ALLH	46	43	2.5	28	370	19.3	5/46	450	0/46
Cobalt	ALLH	46	4	5.4	6.0	6.4	8.64	0/46	29000	0/46
Copper	ALLH	46	44	5.5	1000	7200	14.7	42/46	76000	0/46
Iron	ALLH	46	46	2610	6850	14400	21500	0/46	100000	0/46
Lead	ALLH	46	46	6.1	3070	132000	22.3	36/46	2000	1/46
Magnesium	ALLH	46	46	371	926	3140	4610	0/46	—	—
Manganese	ALLH	46	46	64.6	195	604	671	0/46	47000	0/46
Mercury	ALLH	46	2	0.11	0.14	0.17	0.1	2/46	610	0/46
Nickel	ALLH	46	10	9.2	39	188	15.4	4/46	41000	0/46
Potassium	ALLH	46	46	260	630	1760	3460	0/46	—	—
Selenium	ALLH	46	1	0.63	0.63	0.63	1.52	0/46	10000	0/46
Silver	ALLH	46	8	2.3	4.5	9.1	1	8/46	10000	0/46
Sodium	ALLH	46	3	120	460	1130	915	1/46	—	—
Thallium	ALLH	46	0	—	—	—	0.73	0/46	140	0/46
Uranium	ALLH	46	42	2.6	1400	45000	1.82	42/46	6100	1/46
Vanadium	ALLH	46	37	4.5	9.3	18.2	39.6	0/46	14000	0/46
Zinc	ALLH	46	46	12.3	123	2860	48.8	17/46	100000	0/46

Attachment B
Example Excel Input File from MS Access Source
Database in Frequency of Detect Format (Sediments)

Example Excel Input File in FD Format from MS Access Source Database (Soils and Sediments)

Analyte	Analyte_Code	Media	Number_of_Analyses	Number_of_Detects	Concentration_Range	Freq_DetectGrPRG_RES	PRG_RES	Freq_DetectGrPRG_IND	PRG_IND
Aluminum	AL	ALLH	46	46	1800 to 97200	1/46	78000	0/46	100000
Antimony	SB	ALLH	46	2	[8.2 to 16.5]	0/46	31	0/46	820
Arsenic	AS	ALLH	46	14	0.75 to 518	14/46	0.39	12/46	2.3
Barium	BA	ALLH	46	41	38.9 to 196	0/46	5400	0/46	100000
Beryllium	BE	ALLH	46	39	[1] to 101	0/46	150	0/46	2200
Cadmium	CD	ALLH	46	2	[1] to 1.2	0/46	39	0/46	1000
Calcium	CA	ALLH	46	46	533 to 14000	NA	NA	NA	NA
Chromium, total	CR	ALLH	46	43	[2.1] to 372	2/46	210	0/46	450
Cobalt	CO	ALLH	46	4	[4.1] to 6.4	0/46	3400	0/46	29000
Copper	CU	ALLH	46	44	[4.4] to 7150	7/46	2900	0/46	76000
Iron	FE	ALLH	46	46	2610 to 14400	0/46	23000	0/46	100000
Lead	PB	ALLH	46	46	6.1 to 132000	8/46	400	1/46	2000
Magnesium	MG	ALLH	46	46	371 to 3140	NA	NA	NA	NA
Manganese	MN	ALLH	46	46	64.6 to 604	0/46	3200	0/46	47000
Mercury	HG	ALLH	46	2	[0.095] to 0.17	0/46	23	0/46	610
Nickel	NI	ALLH	46	10	[8.2] to 188	0/46	1600	0/46	41000
Potassium	K	ALLH	46	46	264 to 1760	NA	NA	NA	NA
Selenium	SE	ALLH	46	1	0.63 to [1.2]	0/46	390	0/46	10000
Silver	AG	ALLH	46	8	[2] to 9.1	0/46	390	0/46	10000
Sodium	NA	ALLH	46	3	[100] to 1130	NA	NA	NA	NA
Thallium	TL	ALLH	46	0	[0.23 to 4.4]	0/46	5.5	0/46	140
Uranium	U	ALLH	46	42	[1.1] to 45000	17/46	230	1/46	6100
Vanadium	V	ALLH	46	37	[4.1] to 18.2	0/46	550	0/46	14000
Zinc	ZN	ALLH	46	46	12.3 to 2860	0/46	23000	0/46	100000

Example Excel Input File in FD Format from MS Access Source Database (Soils and Sediments) (continued)

Analyte	Freq_DetectGrESL	ESL	Background_Value	Freq_DetectGrBackground	Freq_NDGrBackground	Min_Of_Detects	Mean_Of_Detects	Max_Of_Detects
Aluminum	46/46	5	29200	1/46	0/0	1800	6361.739	97200
Antimony	2/46	0.5	0.83	2/46	44/44	13.6	14.7	15.8
Arsenic	14/46	0.57	8.17	1/46	0/32	0.75	39.59643	518
Barium	41/46	23	295	0/46	0/5	38.9	89.7317	196
Beryllium	39/46	1	1.83	32/46	0/7	1.2	8.910256	101
Cadmium	2/46	1	0.4	2/46	44/44	1.1	1.15	1.2
Calcium	NA	NA	6120	1/46	0/0	533	2495.522	14000
Chromium, total	37/46	3.1	19.3	5/46	0/3	2.5	28.06279	372
Cobalt	4/46	0.51	8.64	0/46	0/42	5.4	6	6.4
Copper	43/46	13	14.7	42/46	0/2	5.5	1034.214	7150
Iron	NA	NA	21500	0/46	0/0	2610	6846.522	14400
Lead	37/46	20	22.3	36/46	0/0	6.1	3070.616	132000
Magnesium	NA	NA	4610	0/46	0/0	371	925.9565	3140
Manganese	46/46	5	671	0/46	0/0	64.6	194.8717	604
Mercury	2/46	0.05	0.1	2/46	29/44	0.11	0.14	0.17
Nickel	4/46	20	15.4	4/46	0/36	9.2	39.04	188
Potassium	NA	NA	3460	0/46	0/0	264	627.9783	1760
Selenium	1/46	0.5	1.52	0/46	0/45	0.63	0.63	0.63
Silver	8/46	0.2	1	8/46	38/38	2.3	4.4875	9.1
Sodium	NA	NA	915	1/46	0/43	117	456.3333	1130
Thallium	0/46	0.033	0.73	0/46	44/46	0	0	0
Uranium	39/46	5	1.82	42/46	2/4	2.6	1386.209	45000
Vanadium	37/46	0.25	39.6	0/46	0/9	4.5	9.305406	18.2
Zinc	46/46	10	48.8	17/46	0/0	12.3	123.2435	2860

Attachment C
**Example Excel Output File in Frequency of Detect Format
for Public or Web-Based Release (Alluvial Groundwater)**

Example Excel Output File in FD Format for Web-Based Release (Alluvial Groundwater)

Analyte	Field Preparation	Number of Analyses	Number of Detects	Minimum of Detects (ug/L)	Mean of Detects (ug/L)	Maximum of Detects (ug/L)	Drinking Water MCL (ug/L)	Frequency of Detects >MCL	NMED Groundwater Standard (ug/L)	Frequency of Detects >NMED Groundwater Standard
Alkalinity (total)	F	4	4	47000	49000	52000	—	—	—	—
Aluminum	F	5	5	340	1854	5300	50	5/5	5000	1/5
Aluminum	NF	4	4	28000	68750	140000	—	—	—	—
Ammonia (expressed as N)	F	5	1	700	700	700	—	—	—	—
Ammonia (expressed as N)	NF	4	1	620	620	620	—	—	—	—
Antimony	F	5	0	—	—	—	6	0/5	—	—
Antimony	NF	4	0	—	—	—	—	—	—	—
Arsenic	F	5	0	—	—	—	50	0/5	100	0/5
Arsenic	NF	4	4	6.5	18	37	—	—	—	—
Barium	F	5	5	53	72	96	2000	0/5	1000	0/5
Barium	NF	4	4	290	630	1200	—	—	—	—
Beryllium	F	5	5	0.03	0.11	0.16	4	0/5	—	—
Beryllium	NF	4	4	2.14	8.94	15.5	—	—	—	—
Boron	F	5	5	23	27	32	—	—	750	0/5
Boron	NF	4	4	32	38	43	—	—	—	—
Cadmium	F	5	2	0.16	0.19	0.23	5	0/5	10	0/5
Cadmium	NF	4	4	0.447	1.48	2.61	—	—	—	—
Calcium	F	5	5	11000	12200	13000	—	—	—	—
Calcium	NF	4	4	16000	22000	29000	—	—	—	—
Chloride	F	4	4	16000	17000	18000	250000	0/4	250000	0/4
Chromium	F	5	5	0.69	2.2	4.3	100	0/5	50	0/5
Chromium	NF	4	4	15	40	79	—	—	—	—
Cobalt	F	5	2	0.65	1.2	1.7	—	—	50	0/5
Cobalt	NF	4	4	7.8	18	36	—	—	—	—

Attachment D
Example Excel Input File from MS Access Source Database
in Frequency of Detect Format (Alluvial Groundwater)

Example Excel Input File in FD Format for Web-Based Release (Alluvial Groundwater)

Analyte	Analyte_Code	Media	Field_Prep	Rfi_Class	Number_of_Analyses	Number_of_Detects	Concentration_Range	PRG_MCL
Alkalinity	ALKT	WGA	Filtered	Inorganic	4	4	47000 to 52000	NA
Aluminum	AL	WGA	Filtered	Inorganic	5	5	340 to 5300	50
Aluminum	AL	WGA	Unfiltered	Inorganic	4	4	28000 to 140000	NA
Antimony	SB	WGA	Filtered	Inorganic	5	0	[0.683 to 1.1]	6
Antimony	SB	WGA	Unfiltered	Inorganic	4	0	[0.683 to 1.01]	NA
Arsenic	AS	WGA	Filtered	Inorganic	5	0	[3 to 3]	50
Arsenic	AS	WGA	Unfiltered	Inorganic	4	4	6.5 to 37	NA
Barium	BA	WGA	Filtered	Inorganic	5	5	53 to 96	2000
Barium	BA	WGA	Unfiltered	Inorganic	4	4	290 to 1200	NA
Beryllium	BE	WGA	Filtered	Inorganic	5	5	0.034 to 0.157	4
Beryllium	BE	WGA	Unfiltered	Inorganic	4	4	2.14 to 15.5	NA
Boron	B	WGA	Filtered	Inorganic	5	5	23 to 32	NA
Boron	B	WGA	Unfiltered	Inorganic	4	4	32 to 43	NA
Cadmium	CD	WGA	Filtered	Inorganic	5	2	[0.13] to 0.228	5
Cadmium	CD	WGA	Unfiltered	Inorganic	4	4	0.447 to 2.61	NA
Calcium	CA	WGA	Unfiltered	Inorganic	4	4	16000 to 29000	NA
Calcium	CA	WGA	Filtered	Inorganic	5	5	11000 to 13000	NA
Chloride	CL(-1)	WGA	Filtered	Inorganic	4	4	16000 to 18000	250000
Chromium, total	CR	WGA	Filtered	Inorganic	5	5	0.69 to 4.3	100
Chromium, total	CR	WGA	Unfiltered	Inorganic	4	4	15 to 79	NA
Cobalt	CO	WGA	Filtered	Inorganic	5	2	[0.58] to 1.7	NA
Cobalt	CO	WGA	Unfiltered	Inorganic	4	4	7.8 to 36	NA
Copper	CU	WGA	Filtered	Inorganic	5	3	[0.56] to 4.4	1300
Copper	CU	WGA	Unfiltered	Inorganic	4	4	13 to 77	NA
Cyanide, total	CN(-1)	WGA	Filtered	Inorganic	1	0	[10 to 10]	200
Cyanide, total	CN(-1)	WGA	Unfiltered	Inorganic	5	0	[10 to 10]	NA
Fluoride	F(-1)	WGA	Filtered	Inorganic	4	4	100 to 170	4000

Example Excel Input File in FD Format for Web-Based Release (Alluvial Groundwater) (continued)

Analyte	Freq_DetectGrPRG_MCL	PRG_LW	Freq_DetectGrPRG_LW	PRG_WH	Freq_DetectGrPRG_WH	PRG_GW
Alkalinity	NA	NA	NA	NA	NA	NA
Aluminum	5/5	5000	1/5	NA	NA	5000
Aluminum	NA	NA	NA	NA	NA	NA
Antimony	0/5	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA
Arsenic	0/5	200	0/5	NA	NA	100
Arsenic	NA	NA	NA	NA	NA	NA
Barium	0/5	NA	NA	NA	NA	1000
Barium	NA	NA	NA	NA	NA	NA
Beryllium	0/5	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA
Boron	NA	5000	0/5	NA	NA	750
Boron	NA	NA	NA	NA	NA	NA
Cadmium	0/5	50	0/5	NA	NA	10
Cadmium	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA
Chloride	0/4	NA	NA	NA	NA	250000
Chromium, total	0/5	1000	0/5	NA	NA	50
Chromium, total	NA	NA	NA	NA	NA	NA
Cobalt	NA	1000	0/5	NA	NA	50
Cobalt	NA	NA	NA	NA	NA	NA
Copper	0/5	500	0/5	NA	NA	1000
Copper	NA	NA	NA	NA	NA	NA
Cyanide, total	0/1	NA	NA	5.2	0/1	200
Cyanide, total	NA	NA	NA	5.2	0/5	NA
Fluoride	0/4	NA	NA	NA	NA	1600

Example Excel Input File in FD Format for Web-Based Release (Alluvial Groundwater) (continued)

Analyte	Freq_DetectGrPRG_GW	PRG_DCG	Freq_DetectGrPRG_DCG	Min_Of_Detects	Mean_Of_Detects	Max_Of_Detects
Alkalinity	NA	NA	NA	47000	49000	52000
Aluminum	1/5	NA	NA	340	1854	5300
Aluminum	NA	NA	NA	28000	68750	140000
Antimony	NA	NA	NA			
Antimony	NA	NA	NA			
Arsenic	0/5	NA	NA			
Arsenic	NA	NA	NA	6.5	17.875	37
Barium	0/5	NA	NA	53	71.8	96
Barium	NA	NA	NA	290	627.5	1200
Beryllium	NA	NA	NA	0.034	0.1064	0.157
Beryllium	NA	NA	NA	2.14	8.940001	15.5
Boron	0/5	NA	NA	23	26.8	32
Boron	NA	NA	NA	32	38.25	43
Cadmium	0/5	NA	NA	0.162	0.195	0.228
Cadmium	NA	NA	NA	0.447	1.47925	2.61
Calcium	NA	NA	NA	16000	22000	29000
Calcium	NA	NA	NA	11000	12200	13000
Chloride	0/4	NA	NA	16000	17000	18000
Chromium, total	0/5	NA	NA	0.69	2.218	4.3
Chromium, total	NA	NA	NA	15	40	79
Cobalt	0/5	NA	NA	0.65	1.175	1.7
Cobalt	NA	NA	NA	7.8	18	36
Copper	0/5	NA	NA	0.63	2.276667	4.4
Copper	NA	NA	NA	13	38.5	77
Cyanide, total	0/1	NA	NA			
Cyanide, total	NA	NA	NA			
Fluoride	0/4	NA	NA	100	135	170

Attachment E
Example Excel Output File in Frequency
of Detect Format for RFI Report

Example Excel Output File in FD Format for RFI Report

Analyte	Media Code	Number of Analyses	Number of Detects	Concentration Range (mg/kg)	Soil Background Value (mg/kg)	Frequency of Detects >Background Value	Frequency of Non-Detects >Background Value
Aluminum	ALLH	46	46	1800 to 97200	29200	1/46	0/0
Antimony	ALLH	46	2	[8.2 to 16.5]	0.83	2/46	44/44
Arsenic	ALLH	46	14	0.75 to 518	8.17	1/46	0/32
Barium	ALLH	46	41	38.9 to 196	295	0/46	0/5
Beryllium	ALLH	46	39	[1] to 101	1.83	32/46	0/7
Cadmium	ALLH	46	2	[1] to 1.2	0.4	2/46	44/44
Calcium	ALLH	46	46	533 to 14000	6120	1/46	0/0
Chromium, total	ALLH	46	43	[2.1] to 372	19.3	5/46	0/3
Cobalt	ALLH	46	4	[4.1] to 6.4	8.64	0/46	0/42
Copper	ALLH	46	44	[4.4] to 7150	14.7	42/46	0/2
Iron	ALLH	46	46	2610 to 14400	21500	0/46	0/0
Lead	ALLH	46	46	6.1 to 132000	22.3	36/46	0/0
Magnesium	ALLH	46	46	371 to 3140	4610	0/46	0/0
Manganese	ALLH	46	46	64.6 to 604	671	0/46	0/0
Mercury	ALLH	46	2	[0.095] to 0.17	0.1	2/46	29/44
Nickel	ALLH	46	10	[8.2] to 188	15.4	4/46	0/36
Potassium	ALLH	46	46	264 to 1760	3460	0/46	0/0
Selenium	ALLH	46	1	0.63 to [1.2]	1.52	0/46	0/45
Silver	ALLH	46	8	[2] to 9.1	1	8/46	38/38
Sodium	ALLH	46	3	[100] to 1130	915	1/46	0/43
Thallium	ALLH	46	—	[0.23 to 4.4]	0.73	0/46	44/46
Uranium	ALLH	46	42	[1.1] to 45000	1.82	42/46	2/4
Vanadium	ALLH	46	37	[4.1] to 18.2	39.6	0/46	0/9
Zinc	ALLH	46	46	12.3 to 2860	48.8	17/46	0/0

Attachment F
Example Excel Output File in
Sample ID-Specific (SID) Format for RFI Report

Example Excel Output File in Sample ID Format for RFI Report

Analyte	Location ID	Sample ID	Sample Concentration (mg/kg)	Soil Background Value (mg/kg)	Media	Depth (ft)
Aluminum	15-03104	0215-95-0541	97200	29200	ALLH	0.00-0.50
Antimony	15-03045	0215-95-0412	8.6 (U)	0.83	ALLH	0.00-0.42
Antimony	15-03046	0215-95-0134	8.5 (U)	0.83	ALLH	0.58-1.08
Antimony	15-03046	0215-95-0415	8.3 (U)	0.83	ALLH	0.00-0.42
Antimony	15-03047	0215-95-0418	15.8	0.83	ALLH	0.00-0.50
Antimony	15-03047	0215-95-0419	16.5 (U)	0.83	ALLH	0.00-0.50
Antimony	15-03047	0215-95-0420	8.7 (U)	0.83	ALLH	0.50-0.67
Antimony	15-03048	0215-95-0422	8.3 (U)	0.83	ALLH	0.00-0.50
Antimony	15-03049	0215-95-0425	8.3 (U)	0.83	ALLH	0.00-0.50
Antimony	15-03050	0215-95-0428	8.2 (U)	0.83	ALLH	0.00-0.50
Antimony	15-03050	0215-95-0429	8.5 (U)	0.83	ALLH	1.50-2.00
Antimony	15-03050	0215-95-0430	9.7 (U)	0.83	ALLH	2.17-2.67
Antimony	15-03051	0215-95-0431	8.2 (U)	0.83	ALLH	0.00-0.50
Antimony	15-03051	0215-95-0432	8.6 (U)	0.83	ALLH	1.50-2.00
Antimony	15-03051	0215-95-0433	9.4 (U)	0.83	ALLH	2.00-2.50
Antimony	15-03057	0215-95-0450	8.8 (U)	0.83	ALLH	0.00-0.50
Arsenic	15-03101	0215-95-0535	518	8.17	ALLH	0.00-0.50
Beryllium	15-03045	0215-95-0412	4	1.83	ALLH	0.00-0.42
Beryllium	15-03046	0215-95-0134	2.4	1.83	ALLH	0.58-1.08
Beryllium	15-03046	0215-95-0415	3.6	1.83	ALLH	0.00-0.42
Beryllium	15-03047	0215-95-0418	22.6	1.83	ALLH	0.00-0.50
Beryllium	15-03047	0215-95-0419	101	1.83	ALLH	0.00-0.50
Beryllium	15-03048	0215-95-0422	3.8	1.83	ALLH	0.00-0.50
Beryllium	15-03068	0215-95-0485	24.1	1.83	ALLH	0.00-0.50
Beryllium	15-03078	0215-95-0503	16.4	1.83	ALLH	0.00-0.25
Beryllium	15-03104	0215-95-0541	4.6	1.83	ALLH	0.00-0.50
Beryllium	15-03104	0215-95-0542	3.3	1.83	ALLH	0.50-1.00
Cadmium	15-03045	0215-95-0412	1.1 (U)	0.4	ALLH	0.00-0.42
Cadmium	15-03046	0215-95-0134	1.1 (U)	0.4	ALLH	0.58-1.08
Cadmium	15-03046	0215-95-0415	1 (U)	0.4	ALLH	0.00-0.42
Cadmium	15-03047	0215-95-0418	1.2	0.4	ALLH	0.00-0.50
Cadmium	15-03047	0215-95-0419	1 (U)	0.4	ALLH	0.00-0.50
Cadmium	15-03047	0215-95-0420	1.1 (U)	0.4	ALLH	0.50-0.67
Cadmium	15-03048	0215-95-0422	1 (U)	0.4	ALLH	0.00-0.50
Cadmium	15-03049	0215-95-0425	1 (U)	0.4	ALLH	0.00-0.50
Cadmium	15-03050	0215-95-0428	1 (U)	0.4	ALLH	0.00-0.50
Cadmium	15-03050	0215-95-0429	1.1 (U)	0.4	ALLH	1.50-2.00

Attachment G
Example Excel Input File from
MS Access Source Database in Sample ID Format

Example Excel Input File for Sample ID RFI Report from MS Access Source Database

ANALYTE_CODE	Analyte	PRS	PRS_ORDER	Location_ID	Sample_ID	Sample_Concentration	Background_Value	Media	BEGIN_DEPTH	DEPTH_FT
AL	Aluminum	15-006(c)	0	15-03104	0215-95-0541	97200	29200	ALLH	0	0.00-0.50
SB	Antimony	15-006(c)	0	15-03045	0215-95-0412	8.6 (U)	0.83	ALLH	0	0.00-0.42
SB	Antimony	15-006(c)	0	15-03046	0215-95-0134	8.5 (U)	0.83	ALLH	0.58	0.58-1.08
SB	Antimony	15-006(c)	0	15-03046	0215-95-0415	8.3 (U)	0.83	ALLH	0	0.00-0.42
SB	Antimony	15-006(c)	0	15-03047	0215-95-0418	15.8	0.83	ALLH	0	0.00-0.50
SB	Antimony	15-006(c)	0	15-03082	0215-95-0508	9.1 (U)	0.83	ALLH	0	0.00-0.50
BE	Beryllium	15-006(c)	0	15-03046	0215-95-0134	2.4	1.83	ALLH	0.58	0.58-1.08
BE	Beryllium	15-006(c)	0	15-03046	0215-95-0415	3.6	1.83	ALLH	0	0.00-0.42
BE	Beryllium	15-006(c)	0	15-03047	0215-95-0418	22.6	1.83	ALLH	0	0.00-0.50
BE	Beryllium	15-006(c)	0	15-03047	0215-95-0419	101	1.83	ALLH	0	0.00-0.50
BE	Beryllium	15-006(c)	0	15-03048	0215-95-0422	3.8	1.83	ALLH	0	0.00-0.50
BE	Beryllium	15-006(c)	0	15-03049	0215-95-0425	5.5	1.83	ALLH	0	0.00-0.50
BE	Beryllium	15-006(c)	0	15-03050	0215-95-0428	2.2	1.83	ALLH	0	0.00-0.50
CD	Cadmium	15-006(c)	0	15-03050	0215-95-0428	1 (U)	0.4	ALLH	0	0.00-0.50
CD	Cadmium	15-006(c)	0	15-03050	0215-95-0429	1.1 (U)	0.4	ALLH	1.5	1.50-2.00
CD	Cadmium	15-006(c)	0	15-03050	0215-95-0430	1.2 (U)	0.4	ALLH	2.17	2.17-2.67
CD	Cadmium	15-006(c)	0	15-03051	0215-95-0431	1.1	0.4	ALLH	0	0.00-0.50
CD	Cadmium	15-006(c)	0	15-03051	0215-95-0432	1.1 (U)	0.4	ALLH	1.5	1.50-2.00
CD	Cadmium	15-006(c)	0	15-03051	0215-95-0433	1.2 (U)	0.4	ALLH	2	2.00-2.50
CD	Cadmium	15-006(c)	0	15-03103	0215-95-0539	1.1 (U)	0.4	ALLH	0	0.00-0.50
CD	Cadmium	15-006(c)	0	15-03104	0215-95-0541	1.1 (U)	0.4	ALLH	0	0.00-0.50
CD	Cadmium	15-006(c)	0	15-03104	0215-95-0542	1.1 (U)	0.4	ALLH	0.5	0.50-1.00
CD	Cadmium	15-006(c)	0	15-03105	0215-95-0545	1.2 (U)	0.4	ALLH	7.33	7.33-7.83
CA	Calcium	15-006(c)	0	15-03050	0215-95-0430	14000	6120	ALLH	2.17	2.17-2.67
CR	Chromium, total	15-006(c)	0	15-03045	0215-95-0412	60.1	19.3	ALLH	0	0.00-0.42
CR	Chromium, total	15-006(c)	0	15-03049	0215-95-0425	372	19.3	ALLH	0	0.00-0.50
CR	Chromium, total	15-006(c)	0	15-03051	0215-95-0431	24.3	19.3	ALLH	0	0.00-0.50
CU	Copper	15-006(c)	0	15-03045	0215-95-0412	2050	14.7	ALLH	0	0.00-0.42
CU	Copper	15-006(c)	0	15-03046	0215-95-0134	151	14.7	ALLH	0.58	0.58-1.08
CU	Copper	15-006(c)	0	15-03046	0215-95-0415	273	14.7	ALLH	0	0.00-0.42
CU	Copper	15-006(c)	0	15-03047	0215-95-0418	4890	14.7	ALLH	0	0.00-0.50

Attachment H
Example Excel Output File in Samples Taken Table Format

Example Output File in Samples Taken Table Format

Sample ID	Location ID	Depth (ft)	Media	TAL Metals	Uranium
PRS 15-006(c)					
0215-95-0412	15-03045	0-0.42	Soil	6528825	6528402
0215-95-0415	15-03046	0-0.42	Soil	6528863	6528402
0215-95-0134	15-03046	0.58-1.08	Soil	6529952	6529824
0215-95-0418	15-03047	0-0.5	Soil	6528863	6528402
0215-95-0419	15-03047	0-0.5	Soil	6528863	6528402
0215-95-0420	15-03047	0.5-0.67	Soil	6528825	6528402
0215-95-0422	15-03048	0-0.5	Soil	6528586	6528059
0215-95-0425	15-03049	0-0.5	Soil	6528586	6528059
0215-95-0428	15-03050	0-0.5	Soil	6528354	6527917
0215-95-0429	15-03050	1.5-2	Soil	6528354	6527917
0215-95-0430	15-03050	2.17-2.67	Soil	6528586	6528059
0215-95-0431	15-03051	0-0.5	Soil	6528354	6527917
0215-95-0432	15-03051	1.5-2	Soil	6528586	6528059
0215-95-0433	15-03051	2-2.5	Soil	6528586	6528059
0215-95-0450	15-03057	0-0.5	Soil	6528586	6528059
0215-95-0453	15-03058	0-0.5	Soil	6528586	6528059
0215-95-0454	15-03058	1.25-1.75	Soil	6528586	6528059
0215-95-0456	15-03059	0-0.5	Soil	6528586	6528059
0215-95-0459	15-03060	0-0.5	Soil	6528586	6528059
0215-95-0476	15-03065	1.5-2	Soil	6528586	6528059
0215-95-0477	15-03065	2.17-2.67	Soil	6528586	6528059
0215-95-0482	15-03067	0.5-1	Soil	6528586	6528059
0215-95-0484	15-03068	0-0.5	Soil	6528586	6528059
0215-95-0485	15-03068	0-0.5	Soil	6528586	6528059
0215-95-0498	15-03073	0-0.5	Soil	6528288	6527733
0215-95-0503	15-03078	0-0.25	Soil	6528288	6527733
0215-95-0504	15-03079	0-0.17	Soil	6528288	6527733
0215-95-0506	15-03081	0-0.5	Soil	6528288	6527733
0215-95-0507	15-03081	0-0.5	Soil	6528288	6527733
0215-95-0508	15-03082	0-0.5	Soil	6528288	6527733
0215-95-0509	15-03083	0-0.5	Soil	6528288	6527733
0215-95-0510	15-03084	0-0.5	Soil	6528288	6527733
0215-95-0513	15-03087	0-0.5	Soil	6528288	6527733
0215-95-0514	15-03088	0-0.5	Soil	6528288	6527733
0215-95-0515	15-03089	0-0.5	Soil	6528288	6527733
0215-95-0518	15-03092	0-0.33	Soil	6528354	6527917
0215-95-0529	15-03098	0-0.33	Soil	6528586	6528059
0215-95-0531	15-03099	0-0.5	Soil	6528586	6528059
0215-95-0532	15-03099	0.58-1.08	Soil	6528700	6527917
0215-95-0535	15-03101	0-0.5	Soil	6528586	6528059
0215-95-0536	15-03101	0.5-1	Soil	6528700	6527917
0215-95-0537	15-03102	0-0.25	Soil	6528586	6528059
0215-95-0539	15-03103	0-0.5	Soil	6528700	6527917
0215-95-0541	15-03104	0-0.5	Soil	6528700	6527917
0215-95-0542	15-03104	0.5-1	Soil	6528700	6527917
0215-95-0545	15-03105	7.33-7.83	Soil	6528156	6527728